relationship to either of the above species by anatomical studies, *Catinella gelida* is here retained as a separate species.

CATINELLA STRETCHIANA (Bland)

Succinea stretchiana Bland, 1865, Ann. Lyc. Nat. Hist. N. Y., 8: 168, fig. 16.

Specimens of this species, collected by Ted C. Frantz of the Nevada Fish and Game Department, at the type locality, Little Valley Washoe Co., Nevada, were dissected. The penis was found to be very similar to that of *Catinella rehderi* (Pilsbry); but the appendix is longer, reaching to the end of the penis or a little beyond. The appendix is much more slender than in *Catinella vermeta* (Say).

NEW SPECIES OF HYDROBIIDAE

BY LESLIE HUBRICHT

ANTROSELATES, new genus (masculine).

Shell: small, solid, globose-conic, narrowly perforate or rimate; spire short, body whorl large, somewhat inflated; sculpture of numerous spiral epidermal threads.

Operculum: paucispiral, hyaline.

Animal: translucent whitish, blind; verge placed in center of back, simple, long and slender, tapering to a point, oval in cross section.

Radula: central tooth without basal denticles or tongue-shaped projection, dorsal margin not reflected, uniformly arched with about fourteen small cusps of nearly uniform size. Lateral teeth with many small cusps of uniform size.

Type species: *Antroselates spiralis.*

The shell of *Antroselates* resembles that of *Somatogyrus* Gill in shape, but differs in the presence of numerous spiral epidermal threads. The animal differs in being blind and in having a very simple verge which is placed in the center of the back, not behind the right tentacle.

ANTROSELATES SPIRALIS, new species. Plate 8, figs. A, B.

Shell: globose-conic, solid, color whitish, subhyaline; sculpture of growth lines and numerous spiral epidermal threads; whorls 4.5, rapidly increasing in diameter, sutures well impressed, spire broadly conical, a little shorter than the aperture; first whorl coiled in the same plain, forming a flat apex; body whorl very large, somewhat shouldered, periphery flattened; aperture roundly ovate, peristome continuous, appressed to the parietal wall, thickened within; umbilicus rimate.

Operculum: ovate, hyaline, paucispiral, of about 3.5 whorls, sculpture consisting only of fine growth lines; nucleus a little left of center, and about one-third the distance from base to apex.

Animal: translucent whitish, blind; verge placed in center of back, simple, long, slender, tapering to a point, oval in cross section.

Height 5.1 mm., Diam. 3.8 mm., Ap. Ht. 3.0 mm., Ap. Width 2.5 mm., Holotype.

Distribution.—*Indiana:* Crawford Co.: stream in Sibert's Well Cave, Wyandotte. *Kentucky:* Edmonson Co.: Mammoth Cave National Park: Echo River and Roaring River in Mammoth Cave; Echo River Spring, holotype 116916, and paratypes 116915, Chicago Natural History Museum, other paratypes 16905, collection of the author; stream in cave in Cedar Sink; large spring in Cedar Sink, stream in Stillhouse Hollow Cave.

Antroselates spiralis is always found on the undersides of large stones in running water. I never found one under a small stone. I can easily understand why an unpigmented snail should stay on the undersides of stones in the springs, but not why it should retain this habit in the total darkness of caves.

FONTIGENS CRYPTICA, new species. Plate 8, figs. E, F.

Shell: elongate, turreted; color pale corneous, subtranslucent; surface smooth, without visible lines of growth; spire conical, apex appearing truncated; whorls 4.5, well rounded, separated by deep sutures; first whorl coiled in the same plane, forming a flat apex; later whorls regularly increasing in size; aperture ovate, peristome continuous, sharp, not thickened within, appessed to the parietal wall for a short distance; umbilicus small or rimate.

Operculum: ovate, hyaline, sculpture very weak, nucleus a little left of center, and about ⅔ the distance from base to apex; of 3.5 whorls.

Animal: translucent whitish, blind; verge unknown.

Height 1.9 mm., Diam. 1.0 mm., Ap. Ht. 0.8 mm., Ap. Width 0.6 mm., Holotype.

Distribution.—*Indiana:* Clarke Co.: under stones in a small spring, 3 miles west of Bethlehem, holotype 116919 C.N.H.M., paratypes 16469, collection of the author. A U.S. topographic map, Bethlehem, Ind.-Ky quadrangle with the type locality marked upon it has been deposited in the Chicago Natural History Museum.

Fontigens cryptica appears to be most closely related to *F. orolibas* Hubricht, differing in being much more slender, with more rounded whorls and deeper sutures.

FONTIGENS TARTAREA, new species. Plate 8, figs. C, D.

Shell: elongate, turreted; buff colored, opaque to sub-translucent; surface smooth with numerous indistinct lines of growth; spire sub-cylindrical, apex appearing truncated; whorls 4.5, flatly convex, separated by deep sutures; first whorl only slightly convex; last three whorls slowly increasing in size; aperture ovate, peristome continuous, sharp, a little thickened within, appressed to the parietal wall for a short distance; umbilicus small or rimate.

Operculum: ovate, paucispiral of about two whorls, hyaline, sculpture very weak, consisting only of growth lines, which are almost invisible except near the end of growth; nucleus placed near the left side about one-third the distance from base to apex.

Animal: whitish, blind; verge unknown.

Height 1.9 mm., Diam. 1.0 mm., Ap. Ht. 0.75 mm., Ap. Width 0.6 mm., Holotype.

Distribution.—*West Virginia:* Greenbrier Co.: stream in Organ Cave, near Organ Cave P. O., holotype 116917 and paratypes 116918 C.N.H.M., other paratypes A4845, collection of the author.

The shell of *Fontigens tartarea* differs from that of *F. cryptica* in having the first whorl slightly convex rather than flat, and in being more cylindrical.

FOUR NEW SPECIES OF PARAVITREA

BY LESLIE HUBRICHT

The four species of *Paravitrea* described herein differ from all previously described species of the subgenus *Paravitrea* s.s. in their small size. The nearest to them in this regard is *Paravitrea smithi* (Clapp), but the two known specimens of that species have only 4.5 whorls and may be immature. They appear to be more closely related to each other than to any of the larger species.

PARAVITREA BIDENS, new species. Plate 9, fig. A.

Shell small, pale pinkish, subhyaline, shining; spire low, convex, with shallow sutures; whorls 6, slowly increasing, last quarter whorl only slightly expanded in mature shells; periphery somewhat flattened in young shells, becoming rounded when mature; umbilicus deep, well-like, contained about 4.5 times in the diameter of the shell; aperture lunate, a little wider than high, slightly flattened above and on the base, lip thin, simple; sculpture of irregularly spaced radial grooves and growth wrinkles, distinct above but becoming weaker on the sides and below; in young shells there is a single pair of tubercular teeth in the last half